REMARKS

Applicants respectfully request that this Amendment After Final Action be admitted under 37 C.F.R. § 1.116. Applicants believe that consideration of this Amendment could lead to favorable action that would remove one or more issues for appeal.

Claims 1-19 are pending. Claims 1, 6-7, 10-11, and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,169,735 B1 of Allen, Jr., et al. ("Allen"). Claims 2, 8-9, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of U.S. Patent No. 6,064,651 of Rogers, et al. ("Rogers"). Claims 3-5 and 14-16 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Claim 19 is allowed.

No claims are amended.

The Examiner states that applicants' arguments filed 9/28/01 are not persuasive. In particular, the Examiner states:

> In page 10 line 26 to page 11 line 5, and page 11 lines 26-28, applicant argued that Allen, Jr. et al. do not disclose encapsulating data into IP packets and transporting the IP packets as in claims 1 and 17 is not persuasive. Allen, Jr. et al. in col. 16 line 55 to col. 17 line 8 which recite *converting ATM data to IP packets and the Internet service providers transporting IP packets to the Internet user* via the dial up modem clearly anticipate encapsulating data into IP packets and transporting IP packets.

(p. 2 Office Action 12/18/01).

Applicants respectfully disagree. Applicants submit that Allen does not disclose converting ATM data to IP packets and transporting IP packets to the Internet users. In particular, Allen discloses that

> The present invention also applies to Internet services providers. The present invention facilitates a more efficient way of

> carrying dial up Internet connections. Currently, an Internet user typically accesses the Internet by connecting to the Internet service provider via a dial up modem. That style of connection consumes resources in the PSTN network just like a regular voice connection. However, unlike a voice connection, a modem connection carries bursty data with Internet Protocol (IP) packets. It is wasteful for bursty data to be carried by TDM circuits. Thus, the T-IWF provides an ideal place to implement a modem pool that terminates the dial up connections and converts them to ATM connections. These ATM connections can be carried by the ATM network to the respective Internet service providers. Depending on the Internet service provider's ability to receive ATM connections, these connections may be delivered to the Internet service provider as ATM, or be converted back to IP packets. The modem termination capability on the T-IWF helps make more efficient use of network resources by carrying Internet traffic as data traffic using ATM connections.

(See Allen, col. 16, line 55 - col. 17, line 8).

Applicants respectfully request the Examiner to draw attention to the marked language in Allen. Allen discloses that the T-IWF converts them (dial up connections) to ATM connections. Allen further discloses that these ATM connections can be carried by the ATM network to the respective Internet Service providers. Allen further discloses carrying Internet traffic as data traffic using ATM connections.

Though Allen discloses that these (ATM) connections may be converted back to IP packets, Allen does not disclose transporting IP packets to the Internet user via the dial up modem, as alleged by the Examiner. Instead, Allen discloses that the Internet service provider may receive ATM or IP packets after transporting the ATM connections.

The Examiner has rejected claims 1, 6-7, 10-11, and 17-18 as being anticipated by Allen. The Examiner states:

> Allen, Jr. et al. disclose all the subject matter now claimed. Note col. 6 lines 43-50 which recite the method for transporting voice data from an originating location to a destination whereby the transporting is enabled by emulating a circuit by employing a

circuit emulation service CES wherein the voice data is converted to ATM cells utilizing ATM adaptation layer 1 AAL1 or ATM adaptation layer 2 AAL2 and col. 16 line 55 to col. 17 line 8 which recite that the invention also applies to Internet services providers whereby the Internet user typically accesses the Internet by connecting to the Internet service provider via a dial up modem; however, unlike a voice connection, a modem connection carries bursty data with Internet Protocol IP packets clearly anticipate the method including the step of configuring a circuit emulation service CES over an Internet protocol IP network and the step of transporting the IP packets from a local interworking function to a remote interworking function according to the CES as in claims 1, 17, and 18. Col. 10 line 64 to col. 11 line 5 which recite the AAL1 or AAL2 allow the choice of carrying voice trunks through an ATM network as constant bit rate traffic or variable bit rate traffic and that if voice is sent as constant bit rate traffic, then ATM Forum's structured DS1 nx64 Kbps circulation emulation service using AAL1 is employed and if voice is sent as real time variable bit rate traffic, then AAL2 as the ATM adaptation layer is employed, thus taking advantage of the many efficiency and performance enhancing features supported by AAL2 clearly anticipate the step of encapsulating data received at a constant bit rate at the local interworking function into IP packets configured according to the CES as in claims 1 and 18. Col. 6 lines 3-22 which recite the use of a centralized control and signaling interworking function CS-IWF device for performing call control functions and using AAL2 to support silence suppression and/or voice compression clearly anticipate exchanging CES control protocol information between the local and remote interworking function as in claim 6 and including the compression option as in claim 7. Col. 14 lines 19-40 which recite the step of buffering to accommodate cell delay variation introduced by the network and cell construction delay clearly anticipate the step of buffering IP packets for at least as long as the maximum delay variation as in claims 10-11.

(pp. 3-5 Office Action 12/18/01).

Applicants respectfully submit that claim 1 is not anticipated by Allen.

Claim 1 includes the following limitations:

> configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured from a local interworking function to a remote interworking function;

encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and

transporting the plurality of IP packets from the local interworking function to the remote interworking function according to the CES.

In contrast, Allen discloses an ATM-based distributed virtual tandem switching system including an ATM switching network, a trunk interworking function (TIWF) device, and a centralized control and signaling interworking function (CS-IWF). In particular, Allen discloses a method of employing a CES to transport voice, converting an origination trunk to ATM cells and transmitting the voice within the ATM cells (see col. 6, lines 43-50).

A distinction of claim 1 over Allen is a method of encapsulating data into a plurality of IP packets as recited in claim 1. By way of contrast, Allen discloses a method of converting an origination trunk to ATM cells.

Another distinction of claim 1 over Allen is a method of transporting the IP packets as recited in claim 1. By way of contrast, Allen discloses a method of transmitting voice within the ATM cells.

The Examiner states:

Allen, Jr. et al. disclose all the subject matter now claimed. Note col. 6 lines 43-50 which recite the method for transporting voice data from an originating location to a destination whereby the transporting is enabled by emulating a circuit by employing a circuit emulation service CES wherein the voice data is converted to ATM cells utilizing ATM adaptation layer 1 AAL1 or ATM adaptation layer 2 AAL2 and col. 16 line 55 to col. 17 line 8 which recite that the invention also applies to Internet services providers whereby the Internet user typically accesses the Internet by connecting to the Internet service provider via a dial up modem; however, unlike a voice connection, a modem connection carries bursty data with Internet Protocol IP packets clearly anticipate the method including the step of configuring a circuit emulation service CES over an Internet protocol IP network and the step of transporting the IP packets from a local interworking function to a

remote interworking function according to the CES as in claims 1, 17, and 18.

(pp. 3-4 Office Action 12/18/01).

Applicants submit that Allen does not anticipate claim 1. Allen discloses a method of carrying Internet traffic as data traffic using ATM connections to make more efficient use of network resources. Specifically, Allen discloses a method of converting bursty data with IP packets into ATM connections and carrying the ATM connections by an ATM network (see col. 16, line 55 to col. 17, line 8). In contrast, claim 1 discloses a method of encapsulating data into IP packets and transporting the IP packets.

Therefore, Allen does not disclose each and every limitation of claim 1. As such, claim 1 is not anticipated by Allen.

Given that claims 6-7 and 10-11 depend directly or indirectly from claim 1, applicants submit that claims 6-7 and 10-11 are not anticipated by Allen.

Moreover, applicants submit that claim 17 is not anticipated by Allen under 35 U.S.C. § 102(e). Claim 17 includes the following limitations:

> a machine readable storage medium having stored thereon a plurality machine executable instructions; and
>
> said instructions, when executed, to implement a method comprising
>
> configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured from a local interworking function to a remote interworking function;
>
> encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and
>
> transporting the IP packets from the local interworking function to the remote interworking function according to the CES.

Allen does not disclose a method of configuring a CES over an IP network, encapsulating data received at a constant bit rate into IP packets, or transporting the IP packets, as recited in claim 17.

Furthermore, applicants submit that claim 18 is not anticipated by Allen under 35 U.S.C. § 102(e). Claim 18 includes the following limitations:

> first circuitry to configure a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured from a local interworking function to a remote interworking function;
>
> second circuitry to encapsulate data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and
>
> third circuitry to transport the IP packets from the local interworking function to the remote interworking function according to the CES.

Allen does not disclose an apparatus comprising a first circuitry to configure a CES over an IP network, a second circuitry to encapsulate data received at a constant bit rate into IP packets, or a third circuitry to transport the IP packets, as recited in claim 18.

The Examiner has rejected claims 2, 8-9, and 12-13 under 35 U.S.C. 103(a) as being unpatentable over Allen in view of U.S. Patent No. 6,064,651 of Rogers, et al. ("Rogers"). In particular, the Examiner states:

> Allen, Jr. et al. did not recite attaching a CES header comprising a version number to each IP packet as in claims 8-9, the circuit header comprising at least a circuit identification, a flag field, sequence number, octet padding values and a data field as in claims 12-13, and the maximum delay variation as in claim 2.
>
> Rogers, et al. teach that it is known to provide the step of traffic shaping for altering the traffic characteristics of a stream of cells on a VCC or a VPC to achieve a desired modification of those traffic characteristics, in order to achieve better network efficiency whilst meeting the QoS objectives or to ensure conformance at a subsequent interface whereby traffic shaping

maintains cell sequence integrity on the connection as set forth at col. 3 lines 31-40 and FIG. 2 which shows the connection parameters written into the cell header in the field of digital and multiplex communications clearly anticipate the CES header comprising the version number to each IP packet, the circuit identification, the flag field, sequence number, octet padding values and data field as in claims 8-9 and 12-13. Col. 1 lines 48-57 which recite means for providing bounded packet delay variation (commonly referred to as cell delay variation) which clearly anticipates the maximum delay variation as in claim 2.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the CES header comprising the version number to each IP packet, the circuit identification, the flag field, sequence number, octet padding values and data field as taught by Rogers et al. to the system of Allen, Jr. et al. because Rogers et al. teach the desirable advantage of achieving better network efficiency whilst meeting the QoS objectives and ensure conformance at a subsequent interface and said better network efficiency being desirable to achieve efficient system operation in Allen, Jr. et al.

(pp. 6-7 Office Action 12/18/2001).

Applicants respectfully submit that Rogers does not cure the deficiencies of Allen with respect to claim 1.

Rogers discloses a method of traffic shaping for causing the time multiplexed packet flows at queuing points within such networks or network elements to conform to specified traffic descriptors. Rogers also discloses that it is known to provide the step of traffic shaping for altering the traffic characteristics of a stream of cells on a VCC or a VPC to achieve a desired modification of those traffic characteristics (see col. 3, lines 31-40).

A distinction of claim 1 over Rogers is that claim 1 refers to a method of configuring a CES over an IP network, the CES being configured from a local internetworking function to a remote internetworking function. Another distinction of claim 1 over Rogers is that claim 1 refers to a method of encapsulating data

into IP packets. Yet another distinction of claim 1 over Rogers is that claim 1 refers to a method of transporting the IP packets.

Therefore, Rogers does not disclose each and every limitation of claim 1.

Applicants also respectfully submit that Allen does not teach or suggest a combination with Rogers and that Rogers does not teach or suggest a combination with Allen. It would be impermissible hindsight based on applicants' own disclosure to combine Allen with Rogers.

Furthermore, even if Allen and Rogers were combined, such a combination would lack a method of encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES, as recited in claim 1. In contrast, a combination of Allen and Rogers would disclose a method of converting a stream of cells to ATM cells.

Another distinction of claim 1 over a combination of Allen and Rogers is that claim 1 refers to a method of transporting the IP packets from the local interworking function to the remote interworking function according to the CES. In contrast, a combination of Allen and Rogers would disclose a method of transmitting the stream of cells within the ATM cells.

Therefore, Allen and Rogers, either individually or in combination, do not disclose each and every limitation of claim 1. As such, claim 1 is not rendered obvious by Allen in view of Rogers under 35 U.S.C. § 103(a).

Given that claims 2, 8-9, and 12-13 depend directly or indirectly from claim 1, applicants submit that claims 2, 8-9, and 12-13 are not obvious over Allen in view of Rogers.

Furthermore, given that claims 3-5 and 14-16 depend directly or indirectly from claim 1, applicants submit that claims 3-5 and 14-16 are allowable.

Therefore, favorable action is solicited.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections have been overcome. Accordingly, applicants request that claims 1-19 be found in condition for allowance.

If there are any additional charges, please charge them to Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Lester J. Vincent
Reg. No. 31,460

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025-1026
(408) 720-8300